

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US96/07594

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :C07K 7/00, 7/08; A61K 38/10; C12N 15/12, 15/74

US CL :514/12, 13; 435/69.1, 320.1; 530/324, 325, 326; 536/23.5

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 514/12, 13; 435/69.1, 320.1; 530/324, 325, 326; 536/23.5

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KOKRYAKOV et al. Protegrins: leukocyte antimicrobial peptides that combine features of corticostatic defensins and tachyplesins. FEBS Letters. July 1993, Volume 327, Number 2, pages 231-236, see entire document.	1, 2, 5, 6
A	WO 89/11291 A1 (INVITRON CORPORATION) 30 November 1989, pages 7-12, 14 and 15.	1, 2, 5, 6
A	EP 0 545 730 A1 (PIONEER HI-BRED INTERNATIONAL, INC.) 09 June 1993, pages 5-8.	1
Y	WO 93/24139 A1 (THE REGENTS OF THE UNIVERSITY OF CALIFORNIA) 09 December 1993, see pages 17-22.	1 and 2

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T	Inter document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be part of particular relevance	*X*	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date	*Y*	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*Z*	document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means		
P document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search
11 SEPTEMBER 1996

Date of mailing of the international search report
11 OCT 1996

Name and mailing address of the ISA/US
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 94/21672 A1 (THE REGENTS OF THE UNIVERSITY OF CALIFORNIA) 29 September 1994, see pages 6-20, 28, 29 and 34-36.	1, 2, 5, 6
Y	WO 95/10534 A1 (SEIKAGAKU CORPORATION) 20 April 1995, see pages 4-30.	1-3, 5, 6
X	MIRGORODSKAYA et al. Primary structure of three cationic peptides from porcine neutrophils. FEBS Letters, September 1993, Volume 330, Number 3, pages 339-342, see page 341.	1, 2, 5, 6
X	STORICI et al. A novel cDNA sequence encoding a pig leukocyte antimicrobial peptide with a cathelin-like pro-sequence. Biochemical and Biophysical Research Communications. 15 November 1993, Volume 196, No. 3, pages 1363-1368, see pages 1364-1364 and Figures 1 and 2.	1, 2, 5, 6
X	ZHAO et al. Identification of a new member of the protegrin family by cDNA cloning. FEBS Letters. June 1994, Volume 346, pages 285-288, see pages 286-288 and Figures 1-4.	1, 2, 6
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Y		5
X	WO 95/03325 A1 (UNIVERSITY OF CALIFORNIA, LOS ANGELES) 02 February 1995, see entire document.	1-6
A	MATSUZAKI et al. Role of Disulfide Linkages in Tachyplesin-Lipid Interactions. Biochemistry. November 1993, Volume 32, pages 11704-11710.	1-5
A	TAMAMURA et al. A comparative study of the solution structures of tachyplesin I and a novel anti-HIV synthetic peptide, T22 ([Tyr ^{5,12} , Lys ⁷]-polyphemusin II), determined by nuclear magnetic resonance. Biochimica et Biophysica Acta. May 1993, Volume 1163, pages 209-216.	1, 2 and 5
A	TAMAMURA et al. Antimicrobial Activity and Conformation of Tachyplesin I and Its Analogs. Chemical and Pharmaceutical Bulletin. May 1993, Volume 41, No. 5, pages 978-980.	1, 2, 4, 5

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☒ Claims Nos.: 7-16
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐

The additional search fees were accompanied by the applicant's protest.

☐

No protest accompanied the payment of additional search fees.

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B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

A-GeneSeq23, PIR47, Swiss-Prot32 & issued U.S. Patent protein databases were searched with SEQ IDs NOs:2, 4, 6, 8, and 10-67 of the latter priority document; DIALOG databases Medline, CA Search, Agricola, Biosis Previews, Derwent Biotech Abs., Current Biotech Abs. and Derwent World Patent Index were searched with terms defensin, corticostatin, protegrin, tachyplesin, cryptdin, cecropin, magainin and antimicrobial peptide